

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (withdrawn): A curable composition for use in obtaining a hydrothermally resistant electroconductive cured product which has a Tg of 160°C or more and a bending strength of 30 MPa or more in accordance with JIS K 6911, the composition comprising:

- (A) a hydrocarbon compound having a plurality of carbon-carbon double bonds, and
- (B) a carbonaceous material,

wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is a polymer wherein the ratio of a monomer unit having a side-chain containing a carbon-carbon double bond and saturated main chain is 60 mole % or more, based on the total number of monomer units constituting the polymer, and wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is at least one kind selected from the group consisting of 1,2-polybutadiene and 3,4-polyisoprene.

2-7. (canceled).

8. (withdrawn): A curable composition according to claim 1, wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is at least one kind selected from the group consisting of the compounds which have been obtained by hydrogenating a portion of the carbon-carbon double bonds in the side chain of 1,2-polybutadiene and 3,4-polyisoprene.

9. (withdrawn): A curable composition according to claim 1, wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is a blend comprising:

at least one kind selected from the group consisting of the compounds which have been obtained by hydrogenating a portion of the carbon-carbon double bonds in the side chain of 1,2-polybutadiene and/or 3,4-polyisoprene; and

at least one kind selected from the group consisting of 1,2-polybutadiene and/or 3,4-polyisoprene.

10. (withdrawn): A curable composition according to claim 1, wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds comprises:

5 to 80 mass % of at least one kind selected from the group consisting of the compounds which have been obtained by hydrogenating a portion of the carbon-carbon double bonds in the side chain of 1,2-polybutadiene and/or 3,4-polyisoprene; and

20 to 95 mass % of at least one kind selected from the group consisting of 1,2-polybutadiene and/or 3,4-polyisoprene.

11. (withdrawn): A curable composition according to claim 1, wherein the carbonaceous material (B) is selected from the group consisting of, or a combination of at least two kinds of: natural graphite, artificial graphite, expanded graphite, carbon black, carbon fiber, vapor-phase grown carbon fiber, and carbon nanotube.

12. (withdrawn): A curable composition according to claim 1, wherein the carbonaceous material (B) has a powder electric resistivity in the right angle direction that is 0.1 Ωcm or less with respect to the applied pressure direction in a state where the carbonaceous material is pressed so as to provide a bulk density of the carbonaceous material of 1 g/cm^3 .

13. (withdrawn): A curable composition according to claim 1, wherein the carbonaceous material (B) contains 0.05 mass % to 10 mass % of boron.

14. (withdrawn): A curable composition according to claim 1, which further contains a reactive monomer (C).

15. (withdrawn): A hydrothermally resistant electroconductive cured product which has been obtained by curing the curable composition according to claim 1.

16. (currently amended): A hydrothermally resistant electroconductive cured product which has a Tg of 160°C or more, ~~and~~ a bending strength of 30 MPa or more in accordance with JIS K 6911, and a volume resistivity of $2 \times 10^{-2} \Omega\text{cm}$ or less, by curing a curable composition comprising:

- (A) a hydrocarbon compound having a plurality of carbon-carbon double bonds,
- (B) an electroconductive carbonaceous material selected from the group consisting of, or a combination of at least two kinds of: natural graphite, artificial graphite, expanded graphite, carbon fiber, vapor-phase grown carbon fiber, and carbon nanotube, and
- (C) at least one curing initiator selected from the group consisting of organic peroxides and azo compounds,

wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is a polymer wherein the ratio of a monomer unit having a side-chain containing a carbon-carbon double bond and saturated main chain is 60 mole % or more, based on the total number of monomer units constituting the polymer, and

wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is at least one kind selected from the group consisting of 1,2-polybutadiene and 3,4-polyisoprene.

17. (previously presented): A hydrothermally resistant electroconductive cured product according to claim 16, which has a rate of mass change in the range of +1.5 % to -1.5 %, when a test piece of the cured product having a size of 30 mm × 30 mm × 3 mm is subjected to a hydrothermal resistance test at 180°C, for 168 hours.

18. (previously presented): The hydrothermally resistant electroconductive cured product according to claim 16 in the form of a hydrothermally resistant molded product wherein at least one flow channel for a gas is formed on one side or both sides thereof.

19. (canceled).

20. (canceled).

21. (previously presented): A process for producing the hydrothermally resistant molded product according to claim 18, wherein the molded product is produced by compression molding, transfer molding, injection molding or injection compression molding.

22. (previously presented): A process for producing the fuel cell separator according to claim 31, wherein the fuel cell separator is produced by compression molding, transfer molding, injection molding or injection compression molding.

23. (withdrawn): A curable composition for the fuel cell separator, which comprises the curable composition according to claim 1.

24. (canceled).

25. (canceled).

26. (withdrawn): The curable composition according to claim 1 further comprising a curing initiator.

27. (withdrawn): The curable composition according to claim 26, wherein the curing initiator is a peroxide curing agent.

28. (canceled).

29. (previously presented): The hydrothermally resistant electroconductive cured product according to claim 16, wherein the carbonaceous material (B) has a power electric resistivity in the right angle direction that is $0.1 \Omega\text{cm}$ or less with respect to the applied pressure direction in a state where the carbonaceous material is pressed so as to provide a bulk density of the carbonaceous material of 1 g/cm^3 .

30. (previously presented): The hydrothermally resistant electroconductive cured product according to claim 16, wherein the carbonaceous material (B) contains 0.05 mass % to 10 mass % of boron.

31. (previously presented): A fuel cell separator formed from the hydrothermally resistant electroconductive cured product according to claim 16, wherein at least one flow channel for a gas is formed on one side or both sides thereof.

32. (previously presented): The fuel cell separator according to claim 31, which has a rate of mass change in the range of +1.5% to -1.5%, when a test piece of the fuel cell separator having a size of 30 mm x 30 mm x 3 mm is subjected to a hydrothermal resistance test at 180 °C, for 168 hours.

33. (previously presented): The fuel cell separator according to claim 31, wherein the electroconductive carbonaceous material (B) contains 0.05 mass % to 10 mass % of boron.

34. (new): A hydrothermally resistant electroconductive cured product which has a T_g of 160°C or more, a bending strength of 30 MPa or more in accordance with JIS K 6911, and a volume resistivity of $2 \times 10^{-2} \Omega\text{cm}$ or less, by curing a curable composition consisting of:

(A) a hydrocarbon compound having a plurality of carbon-carbon double bonds,

(B) an electroconductive carbonaceous material selected from the group consisting of, or a combination of at least two kinds of: natural graphite, artificial graphite, expanded graphite, carbon fiber, vapor-phase grown carbon fiber, and carbon nanotube, and

(C) at least one curing initiator selected from the group consisting of organic peroxides and azo compounds,

wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is a polymer wherein the ratio of a monomer unit having a side-chain containing a carbon-carbon double bond and saturated main chain is 60 mole % or more, based on the total number of monomer units constituting the polymer,

wherein the hydrocarbon compound (A) having a plurality of carbon-carbon double bonds is at least one kind selected from the group consisting of 1,2-polybutadiene and 3,4-polyisoprene, and

wherein the mass ratio of the hydrocarbon compound having a plurality of carbon-carbon double bond as the component (A) and the electroconductive carbonaceous material as the component (B) is 0.01:1 to 1.5:1.

35. (new): A hydrothermally resistant electroconductive cured product according to claim 34, which has a rate of mass change in the range of +1.5 % to -1.5 %, when a test piece of the cured product having a size of 30 mm × 30 mm × 3 mm is subjected to a hydrothermal resistance test at 180°C, for 168 hours.

36. (new): The hydrothermally resistant electroconductive cured product according to claim 34 in the form of a hydrothermally resistant molded product wherein at least one flow channel for a gas is formed on one side or both sides thereof.

37. (new): A process for producing the hydrothermally resistant molded product according to claim 36, wherein the molded product is produced by compression molding, transfer molding, injection molding or injection compression molding.

38. (new): The hydrothermally resistant electroconductive cured product according to claim 34, wherein the carbonaceous material (B) has a power electric resistivity in the right angle direction that is $0.1 \Omega\text{cm}$ or less with respect to the applied pressure direction in a state where the carbonaceous material is pressed so as to provide a bulk density of the carbonaceous material of 1 g/cm^3 .

39. (new): The hydrothermally resistant electroconductive cured product according to claim 34, wherein the carbonaceous material (B) contains 0.05 mass % to 10 mass % of boron.

40. (new): A fuel cell separator formed from the hydrothermally resistant electroconductive cured product according to claim 34, wherein at least one flow channel for a gas is formed on one side or both sides thereof.

41. (new): A process for producing the fuel cell separator according to claim 40, wherein the fuel cell separator is produced by compression molding, transfer molding, injection molding or injection compression molding.

42. (new): The fuel cell separator according to claim 40, which has a rate of mass change in the range of +1.5% to -1.5%, when a test piece of the fuel cell separator having a size of 30 mm x 30 mm x 3 mm is subjected to a hydrothermal resistance test at 180 °C, for 168 hours.

43. (new): The fuel cell separator according to claim 40, wherein the electroconductive carbonaceous material (B) contains 0.05 mass % to 10 mass % of boron.